

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE FULL RECONSTRUCTION OF THE TRAFFIC SIGNAL AT THE INTERSECTION OF MD 648E (BALTIMORE ANNAPOLIS BOULEVARD) AT FURNACE BRANCH ROAD IN ANNE ARUNDEL COUNTY. MD 648E IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL CONTINUE TO OPERATE IN A NEMA FOUR PHASE, FULLY ACTUATED MODE WITH EXCLUSIVE PERMISSIVE LEFT-TURN PHASING FOR SOUTHBOUND MD 648E AND RIGHT-TURN OVERLAP PHASING FOR NORTHBOUND MD 648E AND WESTBOUND FURNACE BRANCH ROAD. THE CONCURRENT MAINLINE AND ALTERNATE SIDE STREET PEDESTRIAN PHASES WILL REMAIN.

CONTROLLER REQUIREMENTS

INSTALL NEMA SIZE 'S' BASE MOUNTED CABINET WITH CONTROLLER, ONE (1) VIDEO DETECTION INTERFACE, 1-4 CAMERAS, ONE (1) 4 CHANNEL DETECTOR AMPLIFIER, AND ALL OTHER ASSOCIATED EQUIPMENT.

APS WILL FUNCTION AS FOLLOWS:

TO CROSS BALTIMORE ANNAPOLIS BOULEVARD

A. WHEN A PEDESTRIAN LOCATES AND PASSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON MESSAGE WILL BE "WAIT TO CROSS BALTIMORE ANNAPOLIS AT FURNACE BRANCH, WAIT".

B. WHEN THE "WALK" PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE "WALK" PHASE.

TO CROSS FURNACE BRANCH ROAD

A. WHEN A PEDESTRIAN LOCATES AND PASSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON MESSAGE WILL BE "WAIT TO CROSS FURNACE BRANCH AT BALTIMORE ANNAPOLIS, WAIT".

B. WHEN THE "WALK" PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE "WALK" PHASE.

PHONE DROP

THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT (410) 787-7635 TO ARRANGE FOR THE PHONE DROP LINE INSTALLATION. THE CONTRACTOR IS TO NOTIFY MR. SNYDER WITH THE NEAREST STREET ADDRESS, ZIP CODE AND PHONE NUMBER.

THE CONTACT PERSONS FOR DISTRICT #5 / 00TS:

District #5

Ms. Kimberly Tran
Assistant District Engineer - Traffic
Phone: 410-841-1033

Mr. Mike Huber
District Utility Engineer
Phone: 410-841-1039

Mr. John S. Mays
Assistant District Engineer - Maintenance
Phone: 410-841-1033

Mr. James Falden
Assistant District Engineer - Construction
Phone: 410-841-1031

Office Of Traffic & Safety

Mr. Richard L. Daff Sr.
Chief, Traffic Operations Division
Phone: 410-787-7630

Mr. Robert Snyder
Assistant Division Chief, Traffic Operations
410-787-7630

Mr. Edward Rodenhizer
Team Leader Signal Operations
Phone: 410-787-7650

Mr. Eugene Bailey
Team Leader Sign Operations
410-787-7670

The Power Company Representative is:
Baltimore Gas & Electric Company
7317 Parkway Drive South
Hanover, Maryland
Phone: 410-859-9062

EQUIPMENT LIST 'A'

EQUIPMENT TO BE FURNISHED BY THE SHA.

ITEM NO	QUANTITY	DESCRIPTION
9000	1 EA	CONTROLLER CABINET, SIZE 'S'
9570	3 SF	[UPDATED] SHEET ALUMINIUM GROUND MOUNTED SIGN 1 EA - R7-4(2) (18 IN. x 24 IN.)
9571	45 SF	[UPDATED] SHEET ALUMINIUM MAST ARM/POLE MOUNTED SIGN: 2 EA - R10-3(1) (9 IN. x 15 IN.) "PUSH BUTTON TO CROSS BALT-ANNAPOLIS BLVD" 2 EA - R10-3(1) (9 IN. x 15 IN.) "PUSH BUTTON TO CROSS FURNACE BRANCH RD" 2 EA - D-3(1) (96 IN. MAX. x 16 IN.) "FURNACE BRANCH RD" DUAL FACED 1 EA - M1-5(4) (78 IN. x 36 IN.) "BALT ANNAP BLVD, NORTH MD 648, SOUTH MD 648"

EQUIPMENT LIST 'B'

EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

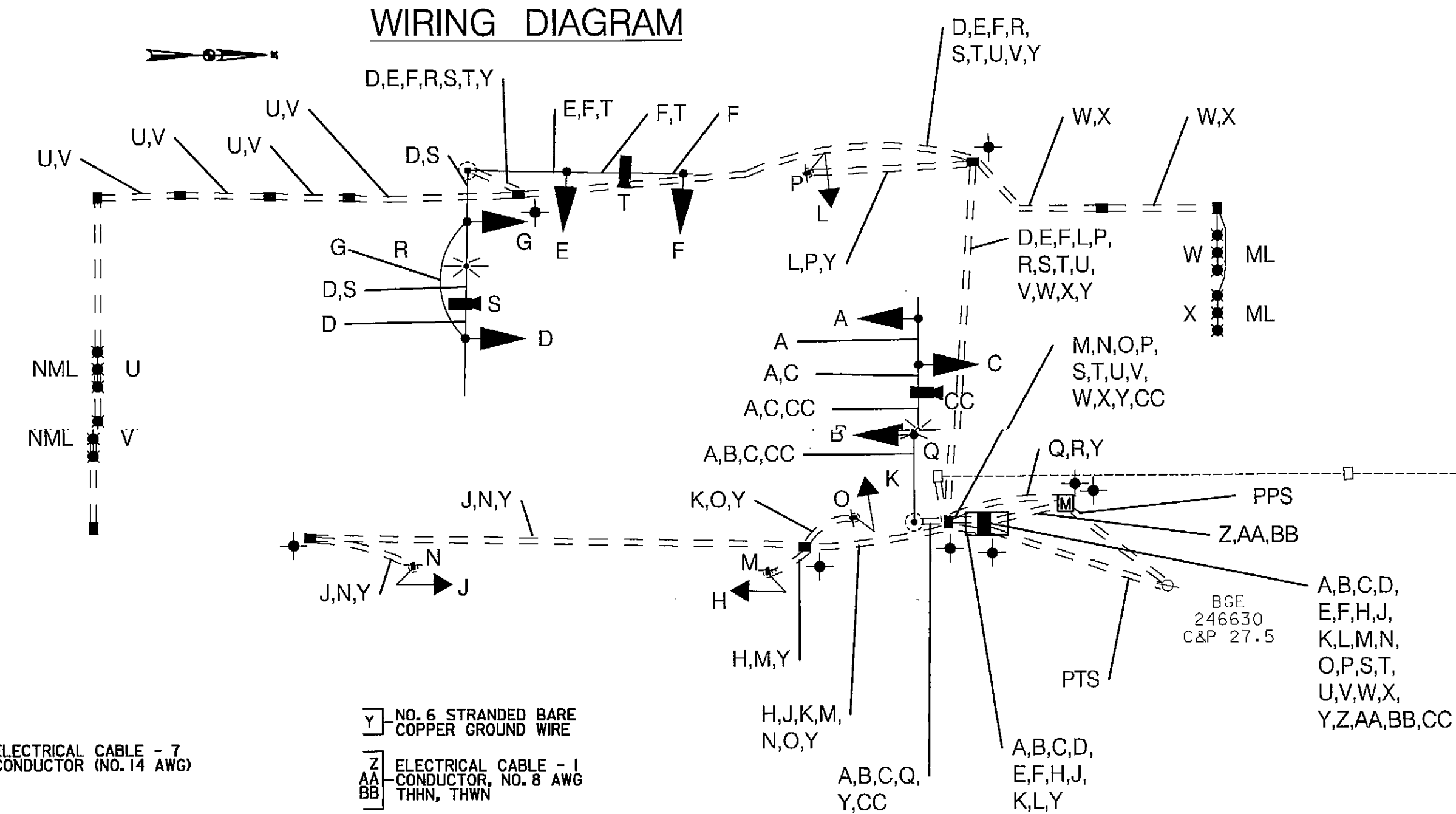
ITEM NO.	QUANTITY	DESCRIPTION
1001	2 EA	MAINTENANCE OF TRAFFIC
2002	6 CY	TEST PIT EXCAVATION
5002	35 LF	5 INCH HEAT APPLIED WHITE OR YELLOW PERMANENT PAVEMENT MARKINGS
5003	535 LF	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS
5004	250 LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
5005	75 LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
6002	130 SF	5 INCH CONCRETE SIDEWALK
8001	26 EA	12 INCH LED SIGNAL HEAD SECTION
8002	1 EA	2-WIRE CENTRAL CONTROL UNIT
8004	3 EA	8 INCH LED SIGNAL HEAD SECTION
8007	2 EA	ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH 250 WATT HPS LAMP AND LUMINAIRE
8008	4 EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
8009	4 EA	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8012	1 EA	EMBEDDED METERED SERVICE PEDESTAL
8015	4 EA	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD
8017	1 EA	MAST ARM POLE & 38' MAST ARM ANY 'T' DIMENSION
8021	2 EA	MICROLOOP PROBE (ANY LENGTH) LEAD- IN CABLE UP TO 1000'
8022	2 EA	NONINVASIVE DETECTOR (ANY LENGTH) LEAD IN CABLE UP TO 1000'
8023	1 EA	REMOVE & DISPOSE OF EQUIPMENT (PER ASSIGNMENT)
8024	1 EA	TWIN MAST ARM POLE & 50'/50' MAST ARMS ANY 'T' DIMENSION
8028	3 EA	VIDEO DETECTION CAMERA AND CABLE ANY LENGTH
8029	10 LF	1" DETECTOR SLEEVE GALVANIZED OR FLEXIBLE LIQUID TIGHT CONDUIT
8036	450 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED
8038	710 LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8039	20 LF	WOOD SIGN SUPPORTS UP TO 4" X 6"
8040	48 SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8042	500 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8045	50 LF	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN
8046	12 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8051	2 EA	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
8052	300 LF	ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINIUM SHIELDED)
8053	420 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8055	620 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8056	850 LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
8058	20 LF	SAW CUT FOR SIGNAL (LOOP DETECTOR)
8062	1 EA	INSTALL CONTROLLER AND CABINET - BASE MOUNT

EQUIPMENT LIST 'C'

EQUIPMENT TO BE REMOVED AND RETURNED TO SHA.

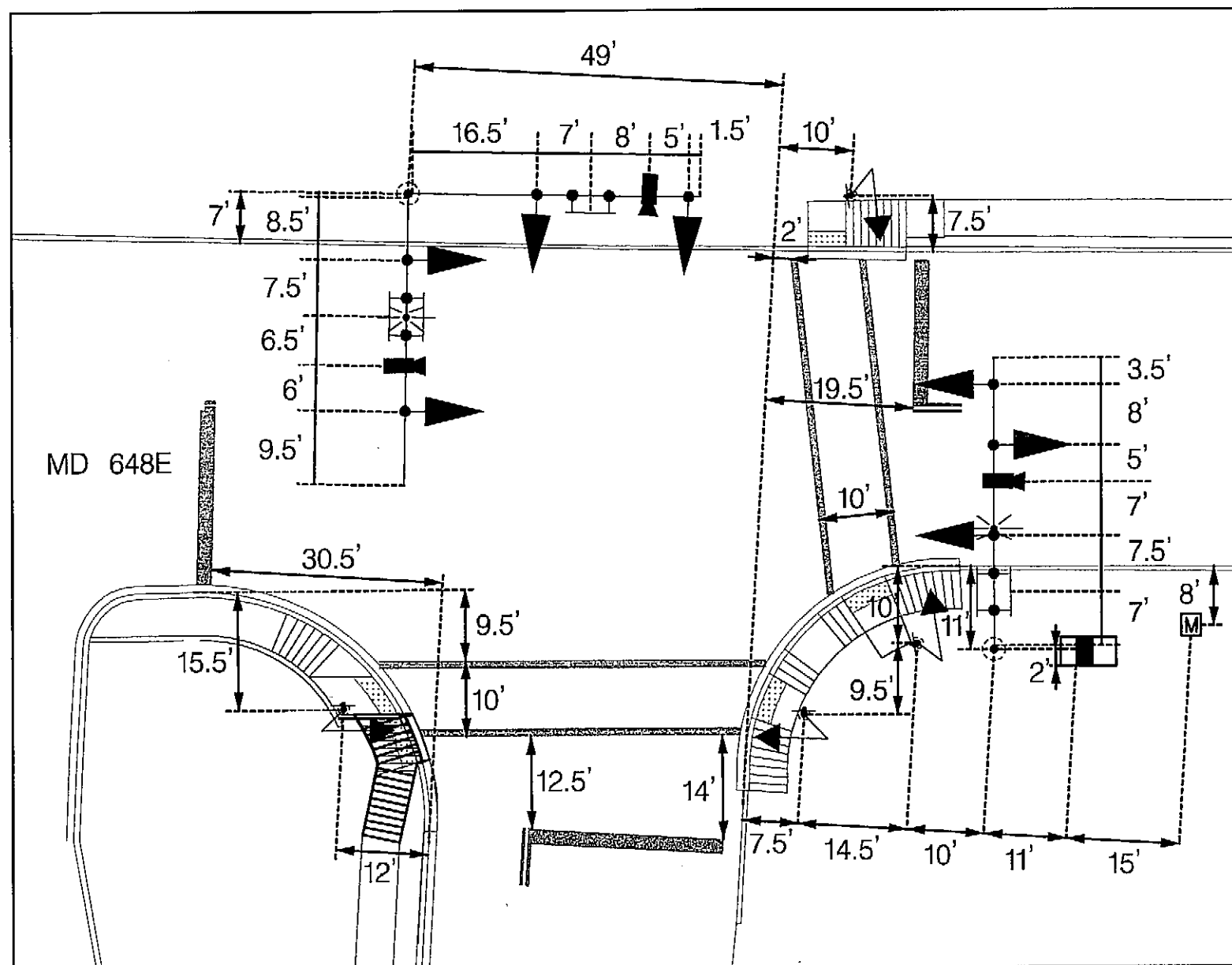
ITEM NO. QUANTITY DESCRIPTION

NONE - ALL REMOVED EQUIPMENT SHALL BECOME THE PROPERTY OF THE CONTRACTOR.



FUTURE WALK TO NORTH
TO MAPLE RD

PROPOSED SIGNAL EQUIPMENT
AND PAVEMENT MARKING DETAIL
(1" = 20')



PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	
	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	
PHASE 2 & 5	R	R	+GG	+GG	G	R	RG+	DW	DW	DW	DW	↓
PHASE 2 & 5 CHANGE	R	R	+YG	+YG	G	R	RY+	DW	DW	DW	DW	↓
PHASE 2 & 6	G	G	G	G	G	R	R	WK	WK	DW	DW	↓
PED CLEAR /COUNTDOWN	G	G	G	G	G	R	R	FLOW	FLOW	DW	DW	↓
PHASE 2 & 6 CHANGE	Y	Y	Y	Y	Y	R	R	DW	DW	DW	DW	↓
PHASE 4	R	RG+	R	R	R	G	G	DW	DW	DW	DW	↓
PHASE 4 CHANGE	R	RY+	R	R	R	Y	Y	DW	DW	DW	DW	↓
PHASE 4 ALT	R	RG+	R	R	R	G	G	DW	DW	WK	WK	↓
PED CLEAR /COUNTDOWN	R	RG+	R	R	R	G	G	DW	DW	FLOW	FLOW	↓
PHASE 4 ALT CHANGE	R	RY+	R	R	R	Y	Y	DW	DW	DW	DW	↓
FLASHING OPERATION	FLY	FLY	FLY	FLY	FLY	FLR	FLR	DARK	DARK	DARK	DARK	↓

TOD NO: XX647-13
SHA NO: AA127B57
MD 648 @ Furnace Branch Road

SHA

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 684E (BALTIMORE ANNAPOLIS BOULEVARD)

AT FURNACE BRANCH ROAD

FERNDAL, MARYLAND

GENERAL INFORMATION

SCALE NONE ADVERTISED DATE 12/2011 CONTRACT NO. XX6475185

DESIGNED BY MCG COUNTY ANNE ARUNDEL

DRAWN BY MCG LOGMILE 02E64806.07

CHECKED BY MTS TMS NO. K597

F.A.P. NO. TOD NO.

TS NO. 1467E-GI DRAWING SG-02 OF 02 SHEET NO. 02 OF 02

PLOTTED: Monday, November 28, 2011 AT 07:39 PM
FILE: I:\PROJECTS\4014265\4014265_0068\Drawings\TRA\p8G-N001_MD648.dgn

STV
STV Incorporated
7125 Ambassador Road, Suite 200
Baltimore, MD 21244
www.stvinc.com